

DATE: November 8, 2018

TO: Minnesota Housing Board Members

FROM: Mary Tingerthal, Commissioner

SUBJECT: **FINANCE AND AUDIT COMMITTEE MEETING**

A meeting of the **Finance and Audit Committee** has been scheduled for **11:00 a.m.** on **Thursday, November 15** at the offices of Minnesota Housing, 400 Wabasha Street, Suite 400, St Paul, MN 55102 in the **Lake Superior Conference Room on the fourth floor.**

The topics for discussion at this meeting are:

- A. Discussion regarding Agency Risk Management
- B. Discussion regarding potential changes to the Board Policy on Investments
- C. Other Business (if any)
- D. Adjournment

This committee is a committee of the whole and all members are encouraged to attend.

If you have questions, please call Rachel Franco at (651) 296-2172.

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Item: Discussion regarding Agency Risk Management**Staff Contact(s):**

Mike Thone, Chief Risk Officer, 651.296.9813, mike.thone@state.mn.us

Barb Sporlein, Deputy Commissioner, 651.297.3125, barb.sporlein@state.mn.us

Request Type:

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Approval | <input checked="" type="checkbox"/> No Action Needed |
| <input type="checkbox"/> Motion | <input checked="" type="checkbox"/> Discussion |
| <input type="checkbox"/> Resolution | <input type="checkbox"/> Information |

Summary of Request:

Agency staff would like to review and discuss the Agency's Risk Management program, highlight recent changes and preview upcoming work.

Fiscal Impact:

None

Meeting Agency Priorities:

- ☐ Address Specific and Critical Local Housing Needs
- ☐ Finance Housing Responsive to Minnesota's Changing Demographics
- ☐ Preserve Housing with Federal Project-Based Rent Assistance
- ☐ Prevent and End Homelessness
- ☐ Reduce Minnesota's Racial and Ethnicity Homeownership Disparity

Attachment(s):

- Enterprise Risk Management Framework
- 2017 Agency Risk Profile
- Agency Risk Management power point presentation

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Enterprise Risk Management (ERM) Framework

July 14, 2017

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Chapter 1 – Introduction

1.01 Minnesota Housing Enterprise Risk Management (ERM) Framework

Minnesota Housing Finance Agency (Agency) has adopted an entirety-of-entity approach to the management of its risks. This approach to risk management is known as Enterprise Risk Management (ERM) and is defined as a process effected by the Agency's board of directors, Commissioner, management and other personnel which is applied across the Agency and is designed to identify potential events that may affect the Agency.

The ERM framework was developed to support the Agency's Risk Management Policy (see Appendix 1 Minnesota Housing Risk Management Policy). This framework includes risk management processes and procedures designed to create, protect and enhance Agency resources and enable the achievement of objectives.

The ERM framework emphasizes that risk management is an essential part of the management process and adds value by limiting surprises and improving information for decision making, and it enhances reputation.

1.02 Terms and Definitions

Assurance. Effectiveness of existing procedures, mitigation strategies and overall Agency-wide controls

Event. Occurrence of a particular set of circumstances

Impact. Consequence of the risk or event occurring

Inherent risk. Risk that an activity would pose if no controls or other mitigating factors were in place. Inherent risk is measured in terms of impact and likelihood to arrive at a risk rating from Low to Very High (see Appendix 2 Section A: Inherent Risk Assessment Matrix).

Likelihood. Used as a general description of probability or frequency

Loss. Any negative consequence or adverse effect, financial or otherwise

Monitor. To check, supervise, observe critically or measure the progress of an activity, action or system on a regular basis in order to identify change from the performance level required or expected

Residual risk. Risk remaining after implementation of risk treatment. A residual risk is measured in terms of the inherent risk multiplied by the assessed level of assurance to arrive at a risk rating from Low to Very High (see Appendix 2 Residual Risk Assessment Matrix)

Risk. The chance of something happening that may have an impact on the achievement of objectives.

Risk Appetite. Organization's approach to assess and eventually pursue, retain, or turn away from risk

Risk Profile. A description of a set of risks

Risk Treatment. The process of selecting and implementing measures to modify risk. Measures include:

- avoiding the risk by deciding not to start or continue an activity
- taking or increasing risk in order to pursue an opportunity
- removing the risk source
- changing the likelihood
- changing the consequence
- sharing the risk with another party or parties
- retaining the risk by informed decision

Risk Owner. Person or entity with the accountability and authority to manage a risk.

Stakeholders. Those people and organizations who may affect, be affected by, or perceive themselves to be affected by a decision, activity or risk.

1.03 Principles of ERM Framework

The ERM framework is based on the following key principles.

Risk management is:

- The responsibility of all appointees, managers, employees and contractors
- Part of all organizational processes
- Part of decision making
- Explicit in addressing uncertainty
- Structured, timely and cost effective
- Based on the best available information
- Transparent and inclusive
- Iterative and responsive to change
- Based on the International Organization for Standardization (ISO 31000 Risk Management – Principles and Guidelines)

1.04 Purpose of the ERM Framework

The purpose of the Agency Enterprise Risk Management Framework is to assist the Board of Directors, Commissioner and management of the Agency meet statutory, regulatory, fiscal, and ethical responsibilities while pursuing the achievement of Agency objectives. Adherence to the framework will reduce the likelihood of resource loss or misuse, while encouraging innovation to include responsible risk taking across the Agency.

1.05 Monitoring and Assessment of the ERM Framework

Progress with the development and implementation of the ERM framework will be monitored by the Agency's Chief Risk Officer with results assessed by the Finance and Audit Committee and reported to the Board of Directors and Agency management.

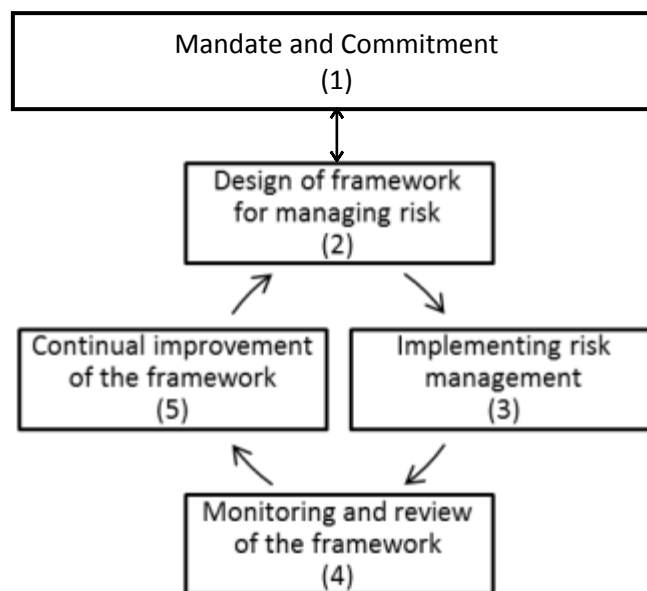
Chapter 2 – Components of the ERM Framework

The ERM framework establishes a cycle that ensures information about risk is adequately reported and used as a basis for decision making, accountability, and improvement.

The ERM framework is made up of the following five elements:

1. **Mandate and commitment.** A strong and sustained commitment from the Board and Senior Management is required for the ERM framework to operate.
2. **Design of the framework for managing risk.** Factors including mission, vision, values, strategic priorities, organizational structure, roles and accountabilities, programs and policies have been considered in the development of this framework and the Risk Management Policy.
3. **Implementing Risk Management.** A risk management process based on ISO 31000 Risk Management – Principles and Guidelines as a standard will be the basis for the risk management process. Appropriate strategy and timing for implementation are responsibilities of the Risk Committee (See Elements of the Risk Management Process and Appendix 3: Minnesota Housing Risk Committee Charter).
4. **Monitoring and review of the framework.** The framework and the policy will be reviewed no less than quarterly to determine if they are still appropriate given the Agency's internally and externally driven risks.
5. **Continual improvement of the framework.** Based on the results of monitoring and reviews, data will become available on how the risk management framework and policy can be improved thus enhancing risk management at the Agency.

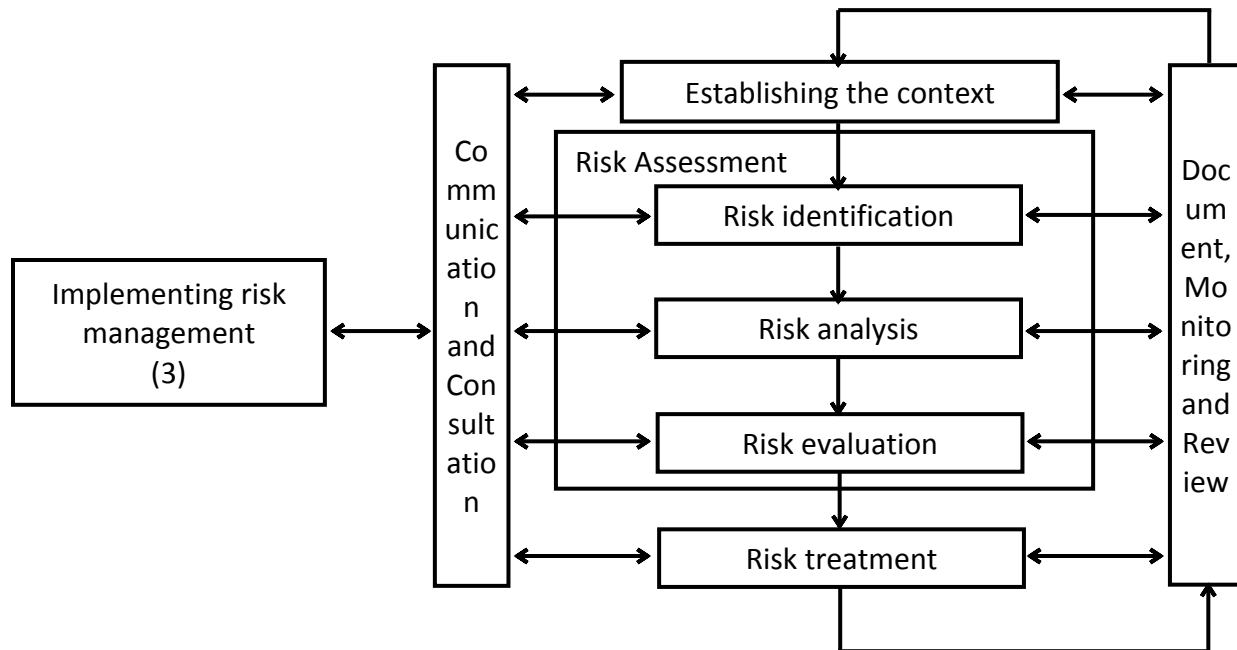
The ERM framework is not intended to prescribe a management system (e.g., strategic planning; budgeting; performance evaluation) but to assist the Agency by integrating risk management into its overall management system.



Chapter 3 – Risk Management Process

3.01 Elements of the Risk Management Process

Risk management is an iterative process of continuous improvement that is best embedded into existing practices or business processes. The risk management process is schematically depicted as follows:



The main elements of the risk management process are:

Communication and consultation. Dialog with internal and external stakeholders as appropriate at each stage of the risk management process, as well as the process as a whole.

Establishing the context. Define the basic parameters within which risks must be managed and set the scope for the rest of the risk management process. The context includes the Agency's external and internal environment and the purpose of the risk management activity.

Risk assessment. The overall process of risk identification, risk analysis, and risk evaluation.

- **Risk identification.** This step seeks to identify the risks to be managed.
- **Risk analysis.** Identify and evaluate existing controls. Determine consequences and likelihood to project the level of risk. This analysis should consider the range of potential consequences and how these could occur.
- **Risk evaluation.** Compare estimated levels of risk to Agency's Risk Appetite and consider the balance between potential benefits and adverse outcomes. This enables decisions to be made about the extent and nature of treatments required and about priorities.

Risk Treatment. Develop and implement specific cost-effective strategies and action plans for increasing potential benefits and reducing potential costs. Allocate responsibilities to those best placed to address the risk and agree on target date for action.

Document, monitor and review. Each stage of the risk management process must be documented. It is necessary to monitor the effectiveness of the risk management process. This is important for continuous improvement. Risks and the effectiveness of treatment measures need to be monitored to ensure changing circumstances are taken into consideration.

3.02 Categories of Risk

The risk facing the Agency can result from both internally and externally driven factors.

Within four broad categories the following list indicates, though not exhaustively, risks that may be relevant to the Agency:

| 1. Strategic Risk | 2. Financial Risk | 3. Operational Risk | 4. Legal Risk |
|--|---|--|--|
| <ul style="list-style-type: none"> • Reputation • Business Model • Organizational Structure • Resource Allocation • Planning / Execution • Competition / Industry Changes • Change in Demand • Legislative | <ul style="list-style-type: none"> • Federal Resources • State Appropriations • Bond Markets • Interest Rates • Counterparties <ul style="list-style-type: none"> ○ GSEs ○ Credit Ratings ○ Correspondent Lenders ○ GIC Providers ○ Brokers ○ Realtors® • Defaults • Collateral • Liquidity • Cash Flow | <ul style="list-style-type: none"> • Program Management • Budgeting • Human Resources • Information Technology • Integrity • Culture • Counterparties <ul style="list-style-type: none"> ○ Grantees ○ Sub-Grantees • Vendors • Business Continuity | <ul style="list-style-type: none"> • Compliance • Regulations • Fraud |

Appendix 1: Risk Management Policy

In support of its mission and deliverables, Minnesota Housing (Agency) is committed to, and places a high priority on managing its risks strategically and systematically.

Risk management is an integral part of the Agency’s approach to decision making and accountability. Risk management implementation begins with the Commissioner and is applied consistently through all levels of the Agency. Consequently, all Agency management and staff are required to integrate risk management procedures and practices into their daily activities.

Risk is a fundamental component in Agency operations and should be managed in a way that produces the best outcomes for the Agency and its stakeholders. The intent of this policy is not to eliminate risk; it is to assist Agency staff to prioritize and manage the risks related to their responsibilities.

This policy requires that Agency management and staff, in coordination with Agency Chief Risk Officer:

- Establish links between the Agency’s objectives, programs, policies and risk management
- Adopt an Agency Risk Management Guide to supplement the Risk Management Policy
- Identify and take opportunities to improve Agency effectiveness and efficiency, as well as taking action to avoid or reduce the probability of negative consequences
- Effectively communicate the risks to be managed
- Establish accountability for decision making regarding risk management
- Balance the cost of managing risk with the anticipated benefits

Responsibilities for Agency Risk Management

Board of Directors

- Approve comprehensive monitoring system tailored to each category of risk to ensure material risks are brought before the Board
- Periodically review these monitoring systems and make inquiries as to their robustness
- Other functions as outlined in Resolution No. MHFA 12-061: Resolution Establishing a Finance and Audit Committee (See Appendix 4).

Commissioner

- Establish and maintain a climate of risk awareness – “Tone at the top”
- Chair Risk Management Committee

- Ensure managers and staff receive support and training to fulfill their risk management responsibilities

Chief Risk Officer

- Develop Risk Management Program
- Coordinate Risk Management Committee agenda and meetings
- Collaborate with management and staff to accomplish risk assessments
- Provide risk management training to Agency staff as required
- Develop and oversee risk assessment plan
- Develop and oversee Agency Risk Management Guide

Managers

- Integrate risk management into all aspects of the business
- Collaborate with Chief Risk Officer to systematically identify, analyze, evaluate and treat any risk that might impact their objectives
- Ensure that risk management practices and treatments are compliant with regulatory, statutory, program rule, program guide and policy requirements
- Attend Risk Management Committee meetings as required
- Attend risk management training sessions as required
- Annually attest that programs for which they are responsible are compliant with regulations, statutes, rules and guides

Staff

- Systematically identify, analyze, evaluate and treat any risk that might impact their objectives
- Maintain an awareness of risks (current and potential) that relate to their area of responsibility
- Actively support and contribute to risk management initiatives
- Advise their managers of risk issues they believe require attention
- Attend Risk Management training sessions as required

Risk Management Reporting

A Risk Management section on the Agency's intranet site will link to the Risk Management Framework, Policy, Guide, training materials and internal summary level results reporting.

Internal Risk Management Reporting

- Summary level status reports of risk assessments by program / process / project and/or application
- Detail level reports by risk assessment relating source(s) of risk, risk event, impact of event, likelihood, consequence, risk treatment, responsibility for treatment, action steps – if any, and timing to completion of action step
- Agendas and exhibits from Risk Management Committee meetings

Appendix 2: Risk Assessment Matrix

| Section A: Inherent Risk Score Table | | | | | | |
|--------------------------------------|--|---|--|--|---|---|
| | | Likelihood | | | | |
| | | 1 - 2 <u>Rarely if ever</u> May occur only in exceptional circumstances | 3 - 4 <u>Unlikely</u> Could occur at some time | 5 - 6 <u>About as likely as not</u> Might occur at some time | 7 - 8 <u>Likely</u> Will probably occur in most circumstances | 9 - 10 <u>Major Highly Likely</u> Expected to occur in most circumstances |
| Impact | 9 - 10 <u>Major</u> Would stop achievement of goals and objectives | Moderate | High | High | Very High | Very High |
| | 7 - 8 <u>Serious</u> Would threaten goals and objectives; requires close management | Moderate | Moderate | High | High | Very High |
| | 5 - 6 <u>Moderate</u> Would necessitate adjustment to the overall function and require corrective action. May have a negative impact | Low | Moderate | High | High | High |
| | 3 - 4 <u>Minor</u> Would threaten an element of the function. May cause small delays or have a minor impact on quality | Low | Low | Moderate | Moderate | High |
| | 1 - 2 <u>Insignificant</u> Impact on function or its objectives is negligible. Routine procedures would be sufficient to deal with the consequences | Low | Low | Moderate | Moderate | High |

| Section B: Residual Risk Score Table | | |
|--------------------------------------|----------------------|--|
| Risk Level | Residual Index Score | Definition |
| Very High | Above 350 | Would prevent achievement of objectives, cause unacceptable cost overruns or schedule delays and requires close Executive attention |
| High | 201 to 350 | Substantial delays to project schedule, significant impact on technical performance or cost, and requires close management attention |
| Moderate | 101 to 200 | Requires identification and control of all contributing factors by monitoring conditions, and reassessment of program / project milestones |
| Low | 100 and below | Normal control and monitoring measures sufficient |

Appendix 3: Risk Management Committee Charter

Risk Management Committee Purpose

The purpose of the Risk Management Committee is to evaluate, approve and prioritize risk management activities at the Agency. The Committee will meet periodically to address matters as needed.

Risk Management Committee Members

- Commissioner - Mary Tingerthal - Chair
- Deputy Commissioner – Barb Sporlein – Co-Chair
- Chief Risk Officer – Will Thompson – Facilitator
- General Counsel – Tom O’Hern
- Chief Information Officer – Tony Peleska
- Chief Financial Officer – Kevin Carpenter
- Assistant Commissioner – Single Family – Kasey Kier
- Assistant Commissioner – Multifamily – Wes Butler
- Assistant Commissioner - Policy – Ryan Baumtrog
- Other managers or staff as required by agenda

A majority of the members must be present for Committee to meet for the purpose of conducting business. Consensus decision making is an aspiration for the Committee. In lieu of consensus, decisions are finalized by the Chair, or Co-Chair in instances where the Chair is not available.

Risk Management Committee Responsibilities

The Committee shall:

- Opine on Agency Risk Management Framework / Policy / Guide
- Develop Agency Risk Appetite delineating the amount and type of risk the Agency is willing to pursue or retain
- Develop, review and approve Agency Risk Profile that documents the key risks to achieving stated objectives
- Identify, monitor and update Agency Key Risk Indicators which measure the potential presence, level or trend of a risk
- Approve recommendations for risk assessment plan / strategies
- Review risk assessment detail reports to determine appropriate actions steps and timing
- Review and opine on summary level risk management reporting

- Review and approve risk management training for management and staff

Risk Management Committee Documentation

Risk Management Committee meeting minutes will be recorded.

Appendix 4: Resolution Establishing a Finance and Audit Committee

MINNESOTA HOUSING FINANCE AGENCY
400 Sibley Street, Suite 300
St. Paul, Minnesota 55101

RESOLUTION NO. MHFA 12-061

RESOLUTION ESTABLISHING A FINANCE AND AUDIT COMMITTEE

WHEREAS, the members of the Minnesota Housing Finance Agency (“Board”) have determined a need to establish a Board Finance and Audit Committee.

NOW THEREFORE BE IT RESOLVED:

THAT, a Finance and Audit Committee (“Committee”) be established as follows:

1. **Committee Members.** The Board shall have a Finance and Audit Committee (“Committee”) consisting of all members of the Board. The Board Chair shall preside at all Committee meetings. A majority of the members (excluding vacancies) shall constitute a quorum for the purpose of conducting the Committee’s business and exercising its powers and for all other purposes. When a quorum is in attendance, action may be taken by the Committee upon a vote of a majority of the members present.
2. **Committee Purpose.** The purpose of the Committee is to receive and review, as necessary, financial information of the Minnesota Housing Finance Agency (“Agency”) and, when necessary, recommend action by the members of the Board as a whole. The term “financial information” includes, but is not limited to, debt issuance and management, financial results of the Agency and the selection of external financial service providers. The Committee is responsible for the oversight of Agency financial management matters including, but not limited to, debt issuance and management, investment management, selection of external financial service providers and the review of the Agency’s financial results. The Committee is also responsible for overseeing the accounting, internal controls and financial reporting processes of the Agency and the audit of the annual financial statements of the Agency. Some of the Committee’s responsibilities may be delegated in writing to Agency staff, as appropriate. The Committee shall meet as needed to address matters. The Committee shall have access to financial expertise, whether in the form of Agency staff or outside financial advisors or auditors. It may ask others to attend its meetings and provide pertinent information as necessary.

3. **Committee Responsibilities.** The Committee shall perform the following duties unless they are performed directly by the Board:

- a) Recommend to the Board the selection and replacement of any financial advisor, investment banker, and publicly registered public accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Board. Each such financial advisor and registered public accounting firm shall report directly to the Committee.
- b) Meet with the financial advisor, outside auditors, the Chief Financial Officer and others, as necessary.
- c) Review with Agency staff interim financial reports issued.
- d) Approve the hiring of a Chief Risk Officer, who reports to the Committee.
- e) Evaluate the financial advisor, investment banker, and publicly registered public accounting firm.
- f) Review, at least annually, with Agency staff, the Chief Risk Officer and counsel:
 - 1. Regulatory and legal matters that, in the opinion of Agency staff and counsel, may have a material impact on the financial statements, related Agency compliance policies and programs and reports.
 - 2. The Agency's code of conduct and ethics to ensure that it is adequate and up-to-date.
 - 3. The results of the Chief Risk Officer's review of compliance with the Agency's code of conduct and ethics.
 - 4. The Agency's and Chief Risk Officer's procedures for the receipt, retention and treatment of complaints received by the Agency or the Chief Risk Officer regarding accounting, internal accounting controls, or auditing matters that may be submitted by any person external or internal to the Agency, including reviewing procedures for the confidential, anonymous submissions by Agency employees of concerns regarding questionable accounting or auditing matters and also review any such complaints received, their current status and the resolution, if one has been reached.
- g) Review, at least annually, with the independent financial auditors, Agency staff and counsel:
 - 1. The audit scope and plan of the independent financial auditors.
 - 2. The Agency's annual financial statements and related footnotes.
 - 3. The independent financial auditors' audit of the financial statements and their report thereon.
 - 4. All material written communications between the independent auditors and Agency management, including:

- a. The independent financial auditors' judgments about the quality, not just the acceptability, of the Agency's accounting practices.
 - b. Any significant changes required in the independent financial auditors' audit plan.
 - c. Any serious difficulties or disputes with Agency management encountered during the audit.
 - d. The effect of any regulatory and accounting initiatives.
5. Material prepared by independent auditors regarding the adequacy of the Agency's internal controls, including computerized information system controls and security.
6. Any significant risks or exposures facing the Agency, including an assessment of the steps Agency management has taken or proposes to take to minimize such risks to the Agency and periodically review compliance with such steps.
- h) Receive financial briefings by Agency staff and external financial service providers.
 - i) Receive and discuss reports regarding the proposed issuance and sale of bonds.
 - j) Make reports and recommendations, as necessary, to the Board.
 - k) Perform such other functions as assigned by the Board.
 - l) The Committee may create subcommittees as necessary.

Adopted this 27th day of September, 2012.


CHAIRMAN

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Evaluating Affordable Housing Efforts

Agency Risk Profile 2017



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Introduction

A risk profile is defined as a periodic documentation of the critical risks to an organization to achieving its stated objectives over a specified future time period. Critical risk is defined as the chance of something happening that would have a clear and direct impact on the achievement of Agency objectives.

The primary purpose for an Agency Risk Profile is to assist the Commissioner, Chief Risk Officer and management team in communicating risk-related issues with the Board.

This risk profile was developed with input from eight members of the Risk Management Committee and their selected staff members. Staff was directed to complete individualized components of an online Agency Risk Profile which contained previously identified critical sources of risks to the Agency. For selected risk sources staff was asked to assess and provide:

- The impact to the Agency should these identified risks occur
- The likelihood of these risks occurring
- The strength of controls in place to prevent, or lessen the impact and/or likelihood of the identified risks
- Additional comments regarding the identified risks.

Risk source assessments are intended to focus on critical risks confronting the Agency that may impact the Agency's ability to achieve the goals of its 2016 – 2019 Strategic Plan and/or 2018 Affordable Housing Plan.

Risk sources were assessed using risk impact, likelihood, and assurance; definitions of these terms are contained in Appendix A.

A Risk Level for each critical risk source was determined according to a Risk Assessment Matrix, which is contained in Appendix B.

Agency Risk Profile

The Agency Risk Profile is comprised of an Executive Summary, Aggregate Results Heat Map Current and Previous Years, Risk Profile Matrix and Risk Source Narratives.

Executive Summary

The economy and housing markets continue to improve nationally and in Minnesota. As the Agency embarks on a \$1.12 billion annual program plan, the Agency is well positioned to address the growing need for more affordable housing for low- and moderate-income Minnesotans. The Agency's work environment consists of volatile and complex housing and finance markets and numerous legal and regulatory rules, and involves many counterparties. There is widespread recognition that the Agency has continued to evolve as an organization to better meet the growing demand for affordable housing. Past changes to programs, financing strategies, and supporting technology were considered during the development of this Risk Profile, as well as initiatives and tasks that have been identified in the 2016 – 2019 Strategic Plan and the 2018 Affordable Housing Plan. Eleven risk sources were assessed, and none received a Very High risk level ranking. Six risk sources received a High risk level ranking, which is an increase from five for the previous year. Overall, the Agency is well aware of these critical sources of risk and has executed, or is contemplating, mitigation strategies to address them.

Aggregate Results Heat Map

The aggregate results of critical risk source assessments for the current year have been plotted to a heat map graph, shown on the next page.

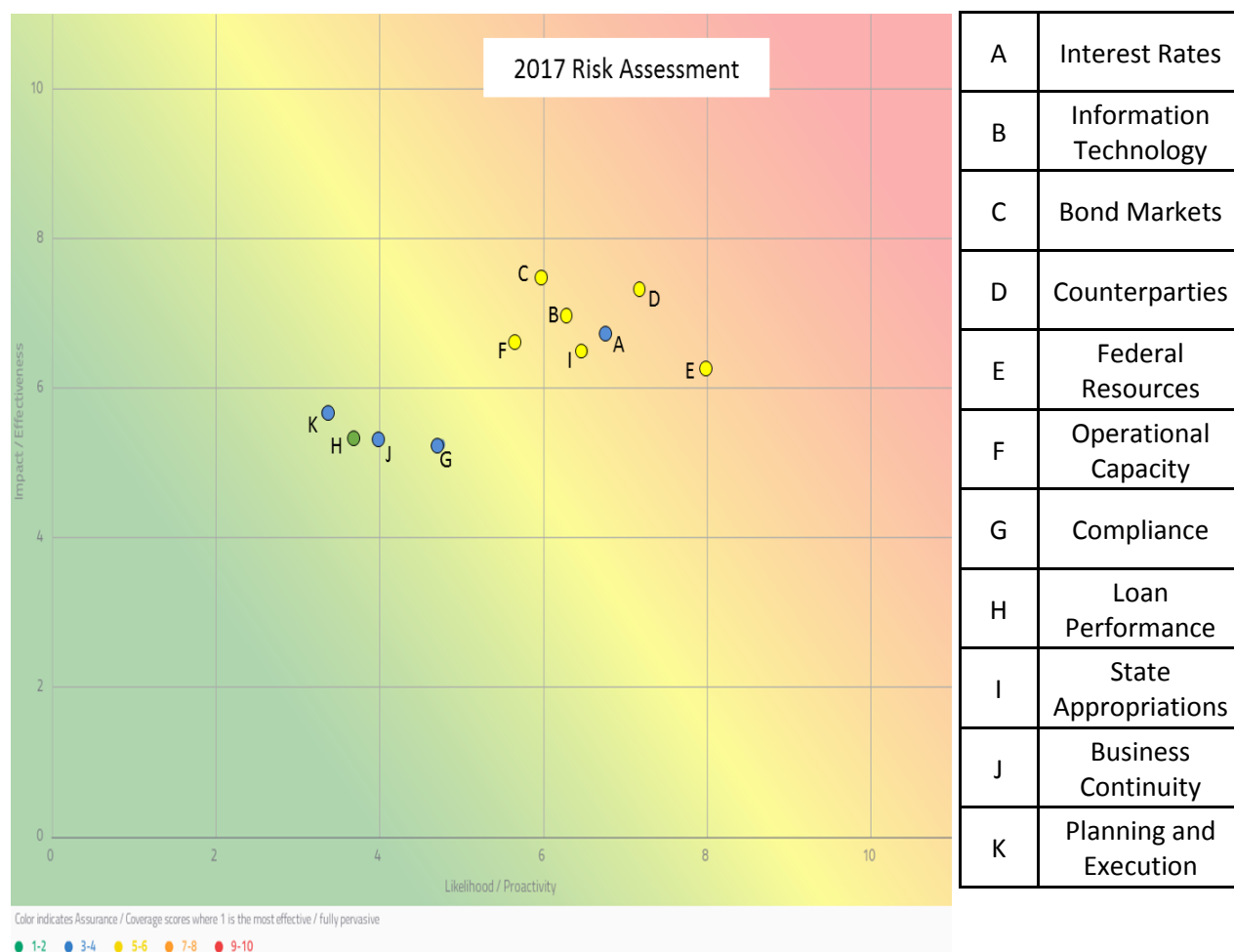
Heat maps are a graphical representation of data where the individual values contained in a matrix are represented as colors. The heat map is intended to visually convey which risk sources pose the greatest challenges to the achievement of Agency objectives. Generally, assessed sources of risk that are plotted in the upper right quadrant of the grid have a greater impact and a higher likelihood of occurrence. The color of the plotted data point for each risk source indicates the level of assurance staff has in existing controls and mitigation strategies.

An Inherent Index score is calculated by multiplying the assessed impact by the likelihood. The Inherent Index is designed to measure the risk that an activity would pose if no controls or other mitigating factors were in place.

The Residual Index measures the risk that remains after controls and mitigation activities are taken into account. A Residual Index score is calculated by multiplying the assessed impact by likelihood by level of Assurance. Residual Index tiering has been incorporated into the Risk Assessment Matrix (Appendix B) to better delineate risk levels.

Additional information regarding heat maps and the calculation of Inherent and Residual Indexes is contained in Appendix C.

Minnesota Housing Risk Management



Risk Profile Matrix

Updates to the Risk Profile Matrix include risks that have been added or removed, trends and previous ratings for comparison.

The Risk Profile has been arranged into a “Top Eleven” format and lists first the higher level critical risk sources as determined by scoring on the Risk Assessment Matrix (Appendix B).

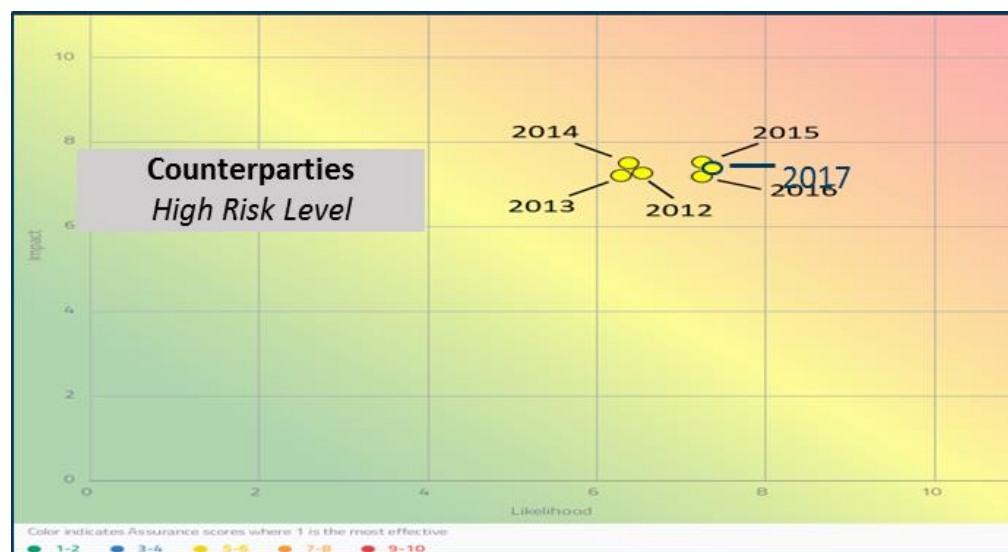
The Risk Profile Matrix lists the 11 previously identified critical sources of risk. The matrix lists the risk sources, from the highest to lowest risk level, as determined by the Residual Index score.

Three critical sources of risk, Counterparties, Bond Markets, and State Appropriations have moderate to slightly higher levels of assessed residual risk in 2017 than in 2016. Additional detail on these and other risk sources is available in the Risk Source Narratives.

| | | 2017 Risk Level | | 2016 Risk Level | | 2015 Risk Level | | 2014 Risk Level | | 2013 Risk Level | | 2012 Risk Level | | 2016-17 |
|---|------------------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------|
| | | Rank | Residual Index | Rank | Residual Index | Rank | Residual Index | Rank | Residual Index | Rank | Residual Index | Rank | Residual Index | |
| D | Counterparties | 1 | 328 | 1 | 314 | 2 | 315 | 3 | 262 | 4 | 237 | 3 | 267 | Worsened |
| B | Information Technology | 2 | 264 | 2 | 262 | 3 | 311 | 2 | 294 | 2 | 331 | 1 | 344 | Worsened |
| A | Interest Rates | 3 | 256 | 3 | 256 | 1 | 332 | 1 | 327 | 1 | 337 | 2 | 298 | No Change |
| E | Federal Resources | 4 | 253 | 4 | 253 | 6 | 192 | 4 | 239 | 5 | 236 | 5 | 192 | No Change |
| C | Bond Markets | 5 | 234 | 6 | 191 | 5 | 215 | 6 | 210 | 3 | 238 | 4 | 238 | Worsened |
| I | State Appropriations | 6 | 219 | 8 | 132 | 8 | 108 | 8 | 117 | 9 | 105 | 7 | 120 | Worsened |
| F | Operational Capacity | 7 | 179 | 5 | 206 | 4 | 220 | 5 | 227 | 6 | 175 | 6 | 191 | Improved |
| G | Compliance | 8 | 132 | 7 | 151 | 7 | 154 | 7 | 130 | 7 | 118 | 8 | 102 | Improved |
| J | Business Continuity | 9 | 88 | 9 | 113 | 9 | 74 | 9 | 77 | 10 | 76 | 10 | 87 | Improved |
| K | Planning and Execution | 10 | 69 | 11 | 53 | 11 | 60 | 11 | 64 | 11 | 68 | 11 | 49 | Worsened |
| H | Loan Performance | 11 | 51 | 10 | 71 | 10 | 72 | 10 | 72 | 8 | 109 | 9 | 96 | Improved |

Risk Source Narratives

The Risk Source Narratives describe the source of each risk, the objectives impacted by that risk and any mitigating actions that are in place or planned.



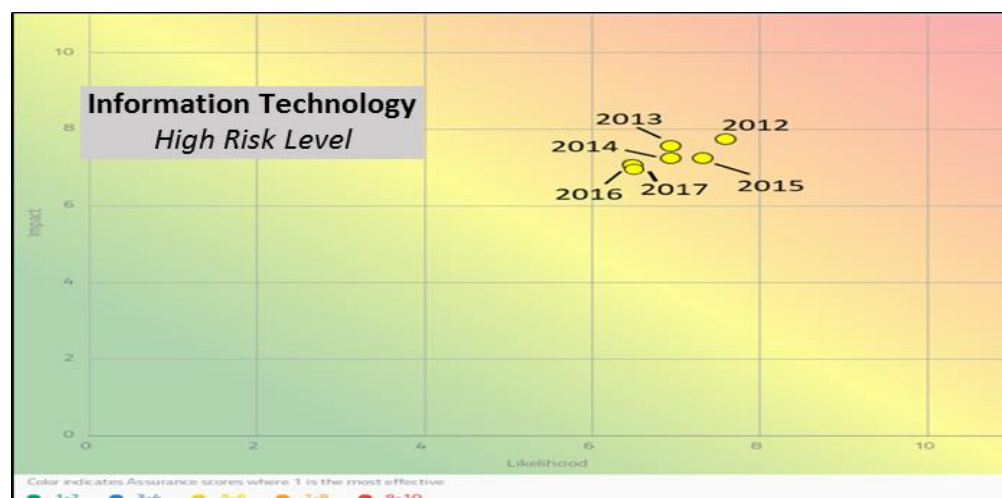
| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|----------------|-------------------------------|--------------------------|----------------|----------------|
| 2014 | Serious (7.5) | About as Likely as Not (6.33) | Could Be Improved (5.33) | High (48) | High (262) |
| 2015 | Serious (7.5) | Likely (7.17) | Could Be Improved (5.5) | High (55) | High (315) |
| 2016 | Serious (7.17) | Likely (7.17) | Could Be Improved (5.5) | High (53) | High (314) |
| 2017 | Serious (7.33) | Likely (7.17) | Could Be Improved (5.7) | High (54) | High (328) |

Counterparties are assessed as a high risk source, which is unchanged from the previous assessment. A slight increase in the assessed impact drove the residual index up from 314 to 328, which is the highest residual risk score for 2017. The relatively unchanged residual index is primarily a result of continued lack of competition for master servicing, greater competition for Single Family loan originations, a limited number of loan and grant administrators in select areas of Minnesota, weak operational capacity for some loan and grant administrators, and areas of poor vendor performance. Counterparties are vital to the Agency accomplishing its strategic and affordable housing plans. Counterparties include Government-Sponsored Enterprises (GSEs) including Fannie Mae and Freddie Mac, other Minnesota state agencies, Tribal Governments, credit rating agencies, capital markets participants, lenders, guaranteed investment contract (GIC) providers, brokers, realtors, grantees, sub-grantees, vendors and borrowers. The likelihood of disruptions to Agency activities because of counterparty actions is recognized as a concern. There is continuing uncertainty around the future role and structure of GSEs. Agency relationships with lenders impact its ability to conduct and attract new businesses. Complex policies, processes and deadlines in working with state contracted vendors increase costs. Nonprofit and government program administrators continue to find it difficult to raise capital to fund operations and services.

Effectiveness of Control / Mitigation Activities:

Know your customer/counterparty remains a critical aspect of overall Minnesota Housing's risk management. Counterparty risk is addressed on an ongoing basis through strengthening relationships with sole source providers and developing alternative processes when necessary. The Agency can comment on the future role and structure of GSEs through its membership in the National Council of State Housing Agencies (NCSHA); however, it cannot control the outcome. The Agency continues to work with lenders and other key counterparties to better understand process, program and technological needs. The Agency provides technical assistance to develop operational capacity for identified loan and grant administrators. Minnesota Housing has hired a Consultant who has produced a study which identifies possible paths for master servicing if US Bank were to exit that business. Attention to managing overall Agency counterparty exposures is evolving but more embedded in standard business practices and protocols.

Minnesota Housing Risk Management



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|-------------------|------------------|-----------------------------|----------------|----------------|
| 2014 | Serious (7.43) | Likely (7.14) | Could Be Improved (5.29) | High (53) | High (294) |
| 2015 | Serious (7.43) | Likely (7.43) | Could Be Improved (5.43) | High (55) | High (311) |
| 2016 | Serious (7.14) | Likely (6.43) | Could Be Improved (5.14) | High (47) | High (262) |
| 2017 | Serious (7) | Likely (6.29) | Could Be Improved (5.29) | High (46) | High (264) |

Information Technology (IT) is assessed as a high risk source, which is unchanged from the previous assessment. A slight decrease in assessed impact and decrease in the assessed likelihood with a slight deterioration in the assessed level of assurance drove the residual index up from 262 to 264 which is the second highest residual risk rating for 2017. Information Technology has always been ranked as the first or second highest residual risk since the inception of the Agency Risk Profile; however this year's residual index remains in the lowest for IT since the inception of the Agency Risk Profile. The Agency's work environment consists of volatile and complex housing and finance markets and numerous legal and regulatory rules, and involves many counterparties. Each aspect of this environment requires information technology systems to make them work effectively. Systems in place today have been effective and have passed risk, audit and compliance standards tested in the annual financial audit. The need to adapt quickly, increasing compliance requirements, and sophistication in the type of funding sources used to fund Agency programs underscore the need for adequate technology to access potential new sources of capital while lessening the likelihood of compliance failures. Multifamily Remodel, Multifamily Loan Servicing Software, Single Family Loan Origination System, Business Intelligence tools, Customer Relationship Management, Enterprise Content Management are major projects with significant technological components currently underway. There is increasing confidence in the process to identify, request, explore, approve and track new technology projects; however, high levels of risk to implementing efficient and effective IT systems remain. Identified risks include:

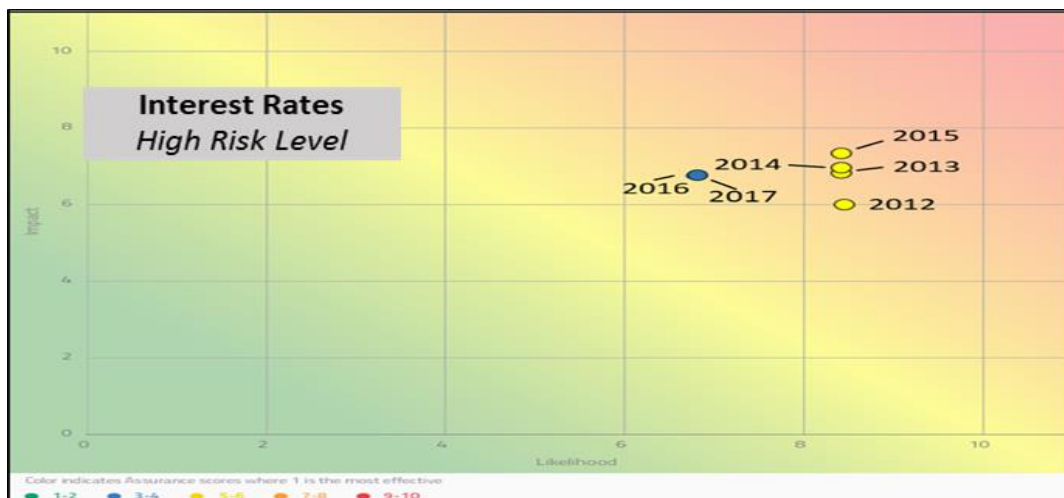
- Business line and Business Technology Support (BTS) personnel must develop deeper understanding of the business requirements to determine the most effective technology solutions.
- Communications between business line and BTS personnel must be enhanced to implement the most effective technology solutions.

- Strong project management practices and realistic timelines are needed to successfully implement technology solutions.
- Adequate staff resources both in BTS and the business lines are needed to support Agency information technology systems projects.
- Current State of Minnesota contracting procedures make it difficult to procure needed software or services on a timely basis.
- Agency-wide initiatives compete for IT resources which impacts project delivery and results in continued unmet technology needs.

There is a visible senior leadership for technology and business process improvements and increased staff communication regarding information technology systems projects.

Effectiveness of Control / Mitigation Activities:

In recent years, the Agency has increased both its BTS staffing and operations budget and has adopted a process to identify, request, explore, approve and track new technology projects. The Agency has a Continuity of Operations Plan and an off-site "hot" site for its technology operations. The Agency has a Business Technology Investment Committee (BTIC) comprised of the Commissioner, Deputy Commissioner, Chief Financial Officer (CFO) and Chief Information Officer (CIO) to prioritize and coordinate technology investments. In addition, the Operations Committee, which is comprised of the Deputy Commissioner, CIO and Director of Operations, is tasked to resolve administrative and operational issues.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|-------------------|------------------|-----------------------------|----------------|----------------|
| 2014 | Serious (6.67) | Likely (8.33) | Could Be Improved (4.67) | High (58) | High (327) |
| 2015 | Serious (7.00) | Likely (8.33) | Could Be Improved (4.67) | High (60) | High (332) |
| 2016 | Serious (6.75) | Likely (6.75) | Good (4.25) | High (47) | High (256) |
| 2017 | Serious (6.75) | Likely (6.75) | Good (4.25) | High (47) | High (256) |

Overall, interest rates were assessed as a high risk source, which is unchanged from the previous assessment. Fluctuations in the interest rate can affect an individual project, the rate has not seen any significant change but pressure to raise rates in 2018 will be present. Interest rate risk management is a key activity at Minnesota Housing because the Agency's large portfolio of assets is the primary revenue-generation tool. Continued volatility of interest rates is likely in the current political and economic environment. Interest rate volatility is out of the Agency's control; however, depending on the interest rate environment, the Agency encounters both challenges and opportunities. Interest rates in the general economy can at any time rise (high rate environment) or fall (low rate environment). Each scenario presents unique challenges to the Agency's business model. The Agency is currently in a low rate environment. A low interest rate environment, which benefits borrowers, is stressful to the Agency's financial results. Low rate environments generally cause high rates of mortgage loan prepayments, challenging the Agency to produce enough new lending to repopulate the balance sheet with assets at acceptable yield levels. In this environment, Agency interest rates are often very similar to rates in the conventional market, so loan production is maintained partially with use of scarce mortgage enhancements (i.e., deferred loans and grants). Assets held as cash in low rate environments produce diminished investment income, including periods of negative arbitrage when prepayments received are temporarily invested below bond yield until bonds can be repaid with the prepayments. Low rates also diminish earnings on committed but undisbursed state appropriations, resulting in less potential for overhead recovery payments to cover actual costs. Short term volatility in interest rates is also a risk because there is a time differential between when the Agency commits to purchase a loan and when the loan is delivered to and financed by the Agency. If interest rates rise dramatically in that time period, the Agency's anticipated profitability can be greatly reduced, eliminated or turned into a loss. While interest rate risks are currently monitored in an effective manner, the increase in packaging loans for sale in the securitization market has increased the volume of loans that are subject to interest rate movements.

Effectiveness of Control / Mitigation Activities:

Several aspects of interest rate management require careful management to affect the desired long-term impacts. These aspects include:

- Maximizing interest rate spread on bonds
- Effective loan pipeline management
 - Strategy to have mortgage pipeline 100% hedged at all times
 - Continue pursuing a best-execution policy that weighs the costs of selling fixed rate or variable rate tax-exempt mortgage revenue bonds compared with selling mortgage-backed securities
 - Setting program interest rates in a market-sensitive manner
 - Loan warehousing
- Effectively place loan production in alternative funding vehicles besides the bond markets: (e.g.,)
 - To Be Announced (TBA) sales of single family loan
 - HUD's Multifamily Accelerated Processing (MAP) program
 - HUD and Treasury Department Federal Financing Bank (FFB) Risk Sharing Initiative

Additionally, technically competent and experienced Agency staff has the ability to take advantage of short-term opportunities in a low or high rate environment while ensuring long-term financial viability due to continuous discipline and sound ethical decision-making skills at all levels of the Agency.

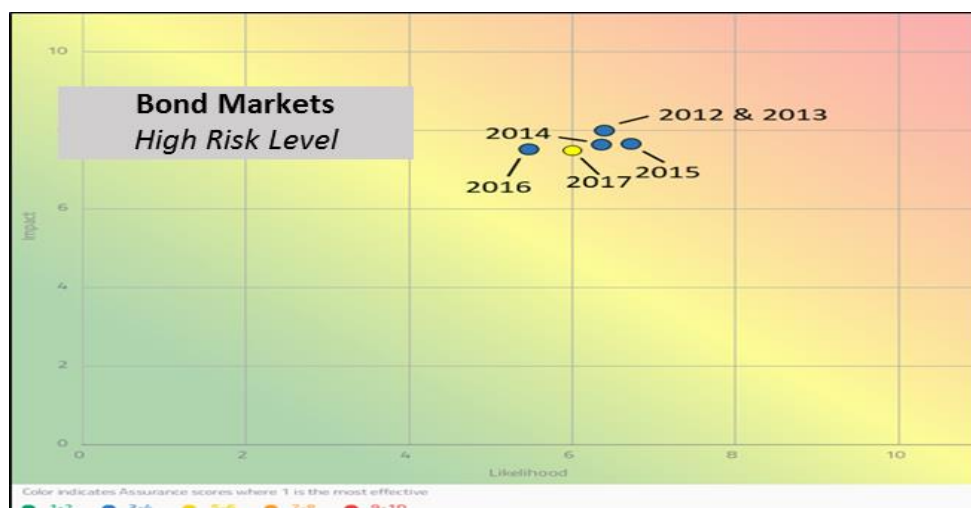


| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|-----------------|---------------|--------------------------|----------------|----------------|
| 2013 | Serious (6.50) | Likely (7.5) | Could Be Improved (4.5) | High (49) | High (236) |
| 2014 | Serious (6.25) | Likely (8) | Could Be Improved (4.5) | High (50) | High (239) |
| 2015 | Moderate (5.5) | Likely (7.75) | Good (4) | High (43) | Moderate (192) |
| 2016 | Moderate (6) | Likely (7.75) | Could Be Improved (4.75) | High (46) | High (253) |
| 2017 | Moderate (6.25) | Likely (8) | Could Be Improved (4.5) | High (50) | High (253) |

Federal Resources are assessed as a high risk source, which is unchanged from the 2016's assessment. The residual index reflects pressures on the availability of tax exempt bonds for housing uses, upcoming changes to the selection approach for Performance Based Contract Administration (PBCA) contracts, and recent tax reform efforts. Because federal funds are a critical source of funding for a number of Agency programs; diminishing federal resources are an Agency-wide concern.

Effectiveness of Control / Mitigation Activities:

The Agency actively participates in federal policy initiatives through its national organization, the National Council of State Housing Agencies (NCSHA), and regularly meets with its congressional delegation to demonstrate the positive impact of programs funded with federal resources, but the complexity of federal policymaking makes it a difficult risk source to mitigate. The Agency focuses compliance efforts on programs with federal funding to ensure that funds are not lost due to non-compliance.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|----------------|-------------------------------|-------------------------|----------------|----------------|
| 2014 | Serious (7.33) | About as Likely as Not (6.33) | Good (4) | High (47) | High (210) |
| 2015 | Serious (7.33) | About as Likely as Not (6.67) | Good (4) | High (49) | High (215) |
| 2016 | Serious (7.5) | About as Likely as Not (5.5) | Good (4) | High (43) | Moderate (191) |
| 2017 | Serious (7.5) | About as Likely as Not (6) | Could Be Improved (4.5) | High (46) | High (234) |

Bond Markets are assessed as a high risk source, which is an increase from the previous assessment. Assessed likelihood increased, driving the residual index up from 191 to 234. The Agency relies on the capital markets to fund its largest revenue producing programs. As loan originations continue to be very strong, Minnesota Housing continues to access the bond market on a regular basis. Increasing pressures on the availability of tax exempt bond volume cap for single family and multifamily financing is a serious threat to addressing the priorities in the strategic plan. Limited capacity in tax exempt bonding would constrain the number of future developments the Agency would be able to fund.

Effectiveness of Control / Mitigation Activities:

While there is nothing that the Agency can do to mitigate the volatility of the market, there is a technically competent and experienced finance team in place. The Agency can use a tax-exempt mortgage-backed securities monthly-pass through structure or shift to selling off loan production in the To Be Announced (TBA) market without having to sell bonds if that proves to be a more attractive financing alternative. Additionally, the Agency employs a loan financing strategy that utilizes the tax-exempt sales of single mortgage-backed securities to enhance a flexible and nimble response to changing market conditions. The Finance Team has scheduled its annual finance team planning meetings to be held in February.



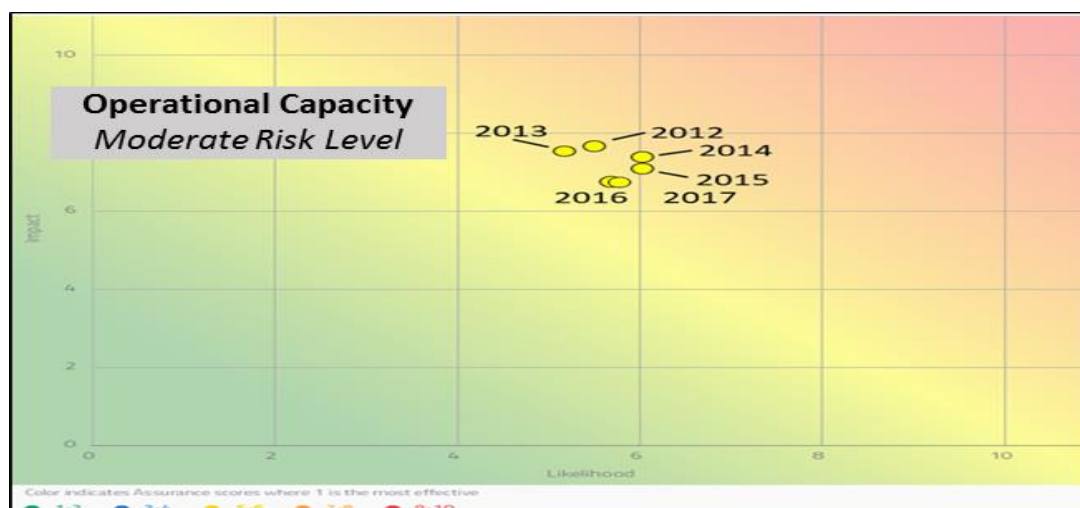
| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|---------------|------------------------------|-----------------------|----------------|----------------|
| 2014 | Moderate (6) | About as Likely as Not (5.5) | Good (3.5) | High (33) | Moderate (117) |
| 2015 | Serious (7) | Unlikely (4.5) | Good (3.5) | Moderate (30) | Moderate (108) |
| 2016 | Serious (7) | About as Likely as Not (5.5) | Good (3.5) | Moderate (38) | Moderate (132) |
| 2017 | Serious (6.5) | About as Likely as Not (6.5) | Could Be Improved (5) | High (43) | High (219) |

State Appropriations are assessed as a high risk source, which is an increase from the previous assessment. An increase in the assessed likelihood and a deterioration in assurance drove the residual index up from 132 to 219. State resources are critically important for funding certain homelessness programs including the Housing Trust Fund (HTF) which provides on-going rental assistance and Family Homelessness Prevention and Assistance. State appropriations, including the Challenge program, are also a critical source of gap financing for the agency. The state is projected to have a budget surplus in the 2018-2019 budget cycle and currently has a reasonable budget reserve. Current state appropriations are just over \$100 million for the current biennium.

Effectiveness of Control / Mitigation Activities:

The Agency has an Assistant Commissioner for Policy and Community Development and Legislative Director, who lead efforts at the state legislature. Agency programs are broadly supported by external advocacy groups, which may be helpful in mitigating potential cuts, but competing priorities from other parts of the state budget are always a threat.

Minnesota Housing Risk Management



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|----------------|-------------------------------|--------------------------|----------------|----------------|
| 2014 | Serious (6.88) | About as Likely as Not (6) | Could Be Improved (5) | High (41) | High (227) |
| 2015 | Serious (6.63) | About as Likely as Not (6) | Could Be Improved (4.88) | High (41) | High (220) |
| 2016 | Serious (6.75) | About as Likely as Not (5.63) | Could Be Improved (4.63) | High (39) | High (206) |
| 2017 | Serious (6.63) | About as Likely as Not (5.63) | Could Be Improved (4.5) | Moderate (37) | Moderate (179) |

Operational Capacity is assessed as a moderate risk source, which is a decrease from the previous assessment. A slight decrease in the assessed impact, combined with a slight improvement in assurance, drove the residual index down from 206 to 179. Having a strong organizational capacity is fundamental to the Agency's ability to implement effective strategies and fulfill its mission. Up to twenty-five percent of Agency employees will be eligible to retire in the next five years. The business is becoming more and more complex, leading to the possibility that positions will need to be upgraded to attract qualified replacements. State salaries for some managerial and professional positions are considered lower than the market and recruiting a pool of qualified replacements is important. In many areas of the Agency, staffing levels remain a concern due to high volume of work and significant process and systems changes. Certain key positions are reported to be overworked and sometimes struggle to keep up with all of the demands and priorities.

Effectiveness of Control / Mitigation Activities:

Strengthening organizational capacity is a core activity of the 2016 – 2019 Strategic Plan, and these efforts will focus on attracting, developing, and retaining a diverse workforce and improving business processes and supporting technology. The Agency assessed the training and development needs of all staff, selected training programs, and executed contracts for their delivery. The Agency rolled out the fourth year of the mentor program; introducing job shadowing and individual development plans. An organizational assessment of cultural competency was completed. All employees have individual work plans and all required performance reviews are completed annually. The Annual Employee Engagement Survey will be conducted again in 2017 with results used to identify and secure professional development opportunities and other Agency improvements.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|--------------------|-------------------------------|----------------|------------------|-------------------|
| 2014 | Moderate (5.29) | Unlikely (4.71) | Good (4.43) | Moderate (26) | Moderate (130) |
| 2015 | Moderate (5.57) | About as Likely as Not (5) | Good (4.43) | Moderate (31) | Moderate (154) |
| 2016 | Moderate (5.5) | About as Likely as Not (5) | Good (4.25) | Moderate (30) | Moderate (151) |
| 2017 | Moderate (5.25) | Unlikely (4.75) | Good (4.25) | Moderate (27) | Moderate (132) |

Compliance is assessed as a moderate risk source, which is unchanged from the previous assessment. A slight decrease in the assessed impact drove the residual index down from 151 to 132. There is an Agency-wide focus on increased compliance requirements related to the Consumer Financial Protection Bureau implementing TILA (Truth in Lending Act) – RESPA (Real Estate Settlement Procedures Act) Integrated Disclosure Rule, also known as TRID, and the complexity of the published Final Rule amending the HOME Investment Partnerships (HOME) Program regulations, as well as new programs such as Section 811 Demonstration and National Housing Trust Fund. Each funding source and program (old, existing, new) involves compliance requirements; some can be very complex and cumbersome. The Agency has staff that understands the compliance requirements, but there is some turnover and new and changing requirements are a reality. The business systems to help track and report on compliance are varied, some are not well integrated and are outdated, but recent audit results have shown strong performance on compliance. In 2015, a complaint was filed with the U.S. Department of Housing and Urban Development (HUD) claiming that the State, Minnesota Housing and the Metropolitan Council have violated the Fair Housing Act. The complaint was signed by the cities of Brooklyn Park, Brooklyn Center, and Richfield, and the Metropolitan Interfaith Council on Affordable Housing (MICAHA). The complaint contends that the State, Minnesota Housing and the Metropolitan Council have failed to affirmatively further fair housing across the Twin Cities region. Minnesota Housing has responded to the complaint and is awaiting a determination from HUD.

Effectiveness of Control / Mitigation Activities:

The Agency has identified several compliance related projects as part of its Vision for Technology Support. The Property Online Reporting Tool (PORT) phase one is complete and phase two is underway. The Agency completed updating all required record retention schedules. Related to Data Practices, the Agency designated a Responsible Authority, Data Practices Compliance Officer, and Division designees, updated the Data Practices Manual, and provided training to staff. Because there is a consistent negative financial risk to the Agency for federal non-compliance, staff has been allocated to provide the appropriate level of compliance. The Agency is engaged in a comprehensive grants management policy compliance effort. McGladrey issued an Unqualified Opinion regarding the Agency's 2017 financial statements.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|--------------------|--------------------|----------------|------------------|-------------------|
| 2014 | Serious (6.33) | Unlikely (4) | Good (3) | Moderate (26) | Low (77) |
| 2015 | Serious (6.33) | Unlikely (4) | Good (2.67) | Moderate (26) | Low (74) |
| 2016 | Serious (6.33) | Unlikely (4.33) | Good (3.67) | Moderate (29) | Moderate (113) |
| 2017 | Moderate (5.33) | Unlikely (4) | Good (3.67) | Moderate (23) | Low (88) |

Business Continuity is assessed as a low risk source, which is a decrease from the previous assessment. Business Continuity is defined in this context as the activities performed by the Agency to ensure that critical business functions will be available to customers, suppliers, regulators, and other entities that must have access to those functions. The Agency has a Continuity of Operations Plan and a designated Continuity of Operations Plan (COOP) Manager.

Effectiveness of Control / Mitigation Activities:

The Agency tests the Disaster Recovery plan every year and business continuity is a component of that event. As part of new office space design, a new data center was developed and backup systems tested. The Agency updates its Employee Policies and Procedures Manual as needed. The Agency information technology and application system(s) audit for the fiscal year ending June 30, 2017 were tested as part of the financial statement audit and were determined to be effective. Record retention schedules for the entire agency are current.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|--------------------|--------------------|----------------|------------------|----------------|
| 2014 | Moderate (5.2) | Unlikely (3.6) | Good (3.00) | Moderate (21) | Low (64) |
| 2015 | Moderate (5) | Unlikely (3.4) | Good (3.00) | Moderate (19) | Low (60) |
| 2016 | Moderate (4.83) | Unlikely (3.17) | Good (3.17) | Moderate (17) | Low (53) |
| 2017 | Moderate (5.67) | Unlikely (3.33) | Good (3.5) | Moderate (20) | Low (69) |

Planning and Execution is assessed as a low risk source, which is unchanged from the previous assessment. Effective planning is vital to any organization, especially one that makes significant financial investments in various programmatic areas. The Agency has a Strategy Management Framework that includes a "family" of planning and reporting documents and processes. The "head of the family" is used in the 2016-2019 Strategic Plan, which was adopted by the Board in July 2015. The plan was developed based on robust research and analysis of housing and finance market data, and an extensive external community and internal staff engagement. It includes the Agency's vision, mission, priorities and strategies. Every year, Agency staff develops an Affordable Housing Plan, the one-year business plan that implements the Strategic Plan. The 2018 Affordable Housing Plan was adopted by the board on September 2017. The Affordable Housing Plan includes funding by program area and estimated number of households assisted and units produced, as well as other work plan highlights. Divisional work plans are based on the Affordable Housing Plan and then individual work plans are developed to support divisional work plans. All plans are aligned with the Strategic Plan. Each plan has one or more corresponding reporting documents containing a variety of performance measures - Results Management Report, Super Report, Annual Assessment and Report, Quarterly Division Reports, Individual Performance Appraisals.

Effectiveness of Control / Mitigation Activities:

For the past six years, 100% of the employees' appraisals were completed. Appraisals measure the degree to which individual work plan goals have been accomplished. The Agency has a skilled team responsible for overseeing all of the Agency's planning, research and evaluation. Planning is well supported by the Senior Leadership Team and is a highly visible part of the organization. The Deputy Commissioner continues to represent the Agency on the State's Continuous Improvement Steering Committee, which should provide access to new ideas and resources. No additional mitigation is necessary at this time.



| | Impact | Likelihood | Assurance | Inherent Index | Residual Index |
|------|--------------------|--------------------|---------------------|------------------|----------------|
| 2014 | Moderate (5.33) | Unlikely (4.33) | Good (3) | Moderate (23) | Low (72) |
| 2015 | Moderate (5.33) | Unlikely (4.33) | Good (3) | Moderate (23) | Low (72) |
| 2016 | Moderate (5.67) | Unlikely (4) | Good (3) | Moderate (23) | Low (71) |
| 2017 | Moderate (5.33) | Unlikely (3.67) | Effective (2.67) | Moderate (20) | Low (51) |

Loan Performance is assessed as a low risk source, which is unchanged from the previously assessed low risk level. The Agency is at risk of financial loss in the event of a severe downturn in the real estate markets. Losses slowed down as home values stabilized and are increasing; the whole loan portfolio continues to pay off and is being replaced with Mortgage Backed Securities, reducing the risk of losses from foreclosures. Also, new multifamily loan production is partially insured under the HUD Risk Sharing program, and the older uninsured loans are gradually paying off. The Agency is now an approved Multifamily Accelerated Processing (MAP) lender which provides an additional outlet to securitize and sell multifamily loans.

Effectiveness of Control / Mitigation Activities:

Effective asset monitoring policies and procedures and competent staff are considered effective control activities. Agency staff has worked closely with loan servicers and has supported a variety of efforts to reduce both loan delinquency losses and loss severities.

Appendix A

Risk Impact

Assess each risk factor according to the criteria below. Do not grant credit for existing controls or mitigating strategies. Do not consider how often the impact may occur. Instead, rate as if the factor manifests itself without controls one or more times. Only one criterion for an impact level need apply to assess at that level.

9 – 10 Major

- Negative impact on Net Assets – over \$250 million
- Catastrophic impact on financial statements (e.g., critical contractual ratios are no longer met)
- Liability threats challenge the going concern status of the Agency
- Long-term impairment of critical functions makes the Agency vulnerable to mission failure
- Non-compliance with Federal / State law, statute, or rule
- Agency's Strategic Plan cannot be achieved
- Agency's Affordable Housing Plan cannot be achieved
- Identified issues are serious variations from the organization's values (e.g., Fraud, Conflict of Interest)
- Process owner has not completed an evaluation of segregation of duties for employees' assigned tasks
- Process generates unusual transactions
- Activities are very complex. Employee training to perform activities is lengthy. Judgment is critical in performance of activities and is mostly principles based.

7 – 8 Serious

- Negative impact on Net Assets – \$100 million to \$250 million
- Regulatory penalties are required
- Serious liability or lawsuit potential
- Financial ratings drastically revised
- Serious Long-term Agency brand (reputation) impairment
- Significant negative impact on ability to achieve strategic plan
- Significant negative impact on ability to achieve Affordable Housing Plan
- Issues significantly contrary to organizational values
- Process owner has evaluated employees' assigned duties within the process and determined that there are existing concerns related to incompatible duties.
- Process generates estimation transactions.
- Activities are very complex. Employee training to perform activities is lengthy. Judgment required in decision-making is mostly rules based.

5 – 6 Moderate

- Negative impact on Net Assets – \$50 to \$100 million
- Impaired business functions cause customer service to significantly deteriorate
- Moderate Agency brand (reputation) issues

- Moderate liability (e.g., lawsuits) potential
- Business practices significantly inconsistent with industry standards
- Moderate negative impact on the Agency's strategic plan
- Moderate negative impact on the Agency's Affordable Housing Plan
- Identified issues are inconsistent with the organization's values
- An evaluation of segregation of duties for employees' assigned tasks has not been completed
- Process generates non-routine transactions.
- Moderate activity complexities; Moderate individual judgment; few aspects of operation covered by established practices. Employee training to perform activities is lengthy.

3 – 4 Minor

- Negative impact on Net Assets – \$10 to \$50 million
- Inconvenient impact on critical business functions
- Compliance issues should be easily resolved with only minor financial consequences
- Small and temporary impact to Agency brand (reputation)
- Strategic plan will not be impaired or impact will not require altering the plan
- Affordable Housing Plan will not be impaired or impact will not require altering the plan
- An evaluation of segregation of duties shows no issues and is sufficiently documented and verifiable
- Process generates routine transactions that do not relate to the company's primary business activities
- Activities are low complexity. Some individual judgment required.

1 – 2 Insignificant

- Negative impact on net income – less than \$10 million
- Critical functions will not be impaired
- No liability or threats to Agency brand (reputation)
- A segregation of duties evaluation has determined that there are no existing concerns within the past 12 months. The evaluation is sufficiently documented and verifiable.
- Process generates routine transactions related to the company's primary business activities.
- Activities are relatively straight forward. Employee training for activity performance is very minimal.

Likelihood

Assess the likelihood that the impact of the risk factor occurs. Do not consider the mitigation effect of existing controls.

9 – 10 Major Highly Likely

At least 90% probability - Expected to occur in most circumstances

Within the past 12 months, the following conditions have existed within the process:

- Task errors not predictable, limits not established
- Major activity bottlenecks, impact on upstream or downstream functions
- Staff has little or no experience, skills, training, and certifications
- Major transactional changes (e.g., major volume spikes, contractual changes)

- Changes in key personnel or staff

7 - 8 Likely

At least 66% but less than 90% probability - Will probably occur in most circumstances

Within the past 12 months, the following conditions or indicators have existed within the process:

- Task errors often in excess of approved limits
- Activity bottlenecks, impact on upstream or downstream functions
- Staff has insufficient skills, training, and certifications
- Significant transactional changes (e.g., major volume spikes, contractual changes)
- Changes in personnel or staff

5 - 6 About as likely as not

At least 33% but less than 66% probability - Might occur at some time

Within the past 12 months, the following conditions or indicators have existed within the process:

- Task errors occasionally in excess of approved limits
- Shortages in staffing levels
- Thinly experienced and skilled staff
- Moderate transactional changes (e.g., volume, nature)
- Some changes in key personnel or staff

3 - 4 Unlikely

At least 10% but less than 33% probability - Could occur at some time

Within the past 12 months, the following conditions or indicators have existed within the process:

- Task errors within approved limits
- Reasonable staffing levels;
- Adequately experienced and skilled staff
- Minimal transactional changes (e.g., volume, nature)
- Minimal changes in key personnel or staff

1 - 2 Rarely if ever

Less than 10% probability - May only occur in exceptional circumstances

Within the past 12 months, the following conditions or indicators have existed within the process:

- Task errors within approved limits
- Appropriate staffing levels
- Highly experienced and skilled staff
- No change in volume and nature of transactions
- No change in key personnel or staff who perform or monitor controls

Assurance (Effectiveness of Mitigation Activities)

Assess the effectiveness of existing procedures, mitigating strategies and overall Agency-wide controls, regardless of which business area performs activities (i.e., activities do not have to be performed by areas or employees reporting to you). Mitigation or controls can be written policies and procedures, fraud risk assessments, control automation, control self-assessments, standard management reporting, etc. Assess controls that mitigate the selected risks based on criteria below.

Tip: You may conclude that you rely on activities performed by other business areas to mitigate risks in your business area. If this is the case, you may assess controls provided by other business areas as you understand them, or you may request other business areas to assess control assurance from their base of knowledge. Regardless of your approach, be sure to document your reasoning.

9 - 10 Ineffective

Control effectiveness is not driven by the organization, but is solely dependent on each individual's background and standards.

Within the past 12 months, the following indicators have existed within the process:

- Ineffective and fragmented controls
- Undocumented procedures, mitigating strategies, entity-wide controls
- Inappropriate or no guidance from "tone at the top" (control environment)
- General inability of key personnel or staff to design and execute effective, cohesive mitigating activities

Within the past 12 months, the following conditions have existed within the process:

- No written guidance for performing tasks
- Key controls that mitigate the risks are mostly manual
- No participation in a control self-assessment program

7 – 8 Poor

Organizational values and behavior expectations are not well defined or consistently understood beyond management.

Within the past 12 months, the following indicators have existed within the process:

- Controls are documented but not performed consistently
- Controls are only partially effective, and the area copes as best they can
- No documented accountability
- Clear evidence of ongoing internal conflicts in the area
- Ineffective or no internal monitoring of controls

Within the past 12 months, the following conditions have existed within the process:

- Some written task guidance in various forms(e.g., personal notes), but may not immediately be available to auditors due to inconsistent format and / or unapproved status
- Key controls that mitigate the risks are mostly manual and hybrid
- Limited participation in a control self-assessment program

5 – 6 Could be improved

Comprehensive policy statements on organizational values and behavior expectations are published to all internal and external stakeholders.

Within the past 12 months, the following indicators have existed within the process:

- Compliance with written policies and procedures at all levels is accepted as the norm
- Controls documented and generally performed, but are not sufficiently responsive to operational changes
- Internal monitoring exists but significant deficiencies in effectiveness were observed
- Some written procedures and standards exist, but may not be sufficiently clear or comprehensive
- Accountability is not enforced

Within the past 12 months, the following conditions have existed within the process:

- Written task guidance for important aspects; immediately available to auditors upon request
- Key controls that mitigate the risks are a combination of automated, hybrid and manual
- Full participation in a control self-assessment program

3 – 4 Good

Cultural norms ensure compliance with organizational values and policies at all levels. Employees believe that 'no one is above the law' because Management's "tone at the top" demonstrates they embrace organizational values in their daily actions.

Within the past 12 months, the following indicators have existed within the process:

- Organizational values and policies require both short-, mid- and long-term benefit
- Formalized processes exist to ensure that organizational values and policies remain the norm
- Controls are effective, documented and followed on most occasions
- Clear ownership of control responsibility and role accountability
- Controls are responsive to operational changes
- Technically competent and experienced staff with some turnover
- No significant deficiencies observed in internal monitoring
- Management participates in control self-assessment activity or controls have been reviewed by groups independent of management (e.g., internal audit) in the past three years

Within the past 12 months, the following conditions have existed within the process:

- External audit has reviewed controls within the past 2 – 3 years with satisfactory results
- Key controls that mitigate the risks are primarily automated and hybrid
- Full participation in a control self-assessment program
- Written task guidance is comprehensive, including (i) how and when to perform tasks; (ii) what tasks are supposed to achieve; (iii) how to handle exceptions; (iv) how tasks affect the process; and (v) how tasks affect upstream and downstream processes

1 – 2 Effective

Board, management and employees alike demonstrate through their actions that behavior outside of organizational values and policies is unacceptable.

In the past 12 months, the following indicators have existed within the process:

- Accountability at all levels is culturally driven
- Embedded ability to take advantage of short-term opportunities while ensuring long-term viability due to continuous discipline and sound ethical decision-making skills at all levels
- Effective, documented controls are in place
- Technically competent and experienced staff with minimal turnover
- Highly effective management review takes place
- No deficiencies observed in control environment (e.g., procedure manual, controls well documented, clear standards and trending for control exceptions)
- Management participates in control self-assessment activity or controls have been reviewed by groups independent of management in the past two years

Within the past 12 months, the following conditions have existed within the process:

- External audit has reviewed controls within the past year with satisfactory results
- Key controls that mitigate the risks are primarily automated and hybrid
- Full participation in a control self-assessment program
- Written task guidance is comprehensive, including (i) how and when to perform tasks; (ii) what tasks are supposed to achieve; (iii) how to handle exceptions; (iv) how tasks affect the process; and (v) how tasks affect upstream and downstream processes

Appendix B

Risk Assessment Matrix

| Section A: Inherent Risk Score Table | | | | | | |
|--------------------------------------|---|---|--|--|---|---|
| Risk Source Description: | | Likelihood | | | | |
| | | 1 - 2 <u>Rarely if ever</u> May occur only in exceptional circumstances | 3 - 4 <u>Unlikely</u> Could occur at some time | 5 - 6 <u>About as likely as not</u> Might occur at some time | 7 - 8 <u>Likely</u> Will probably occur in most circumstances | 9 - 10 <u>Major Highly Likely</u> Expected to occur in most circumstances |
| Impact | 9 - 10 <u>Major</u> Would stop achievement of goals and objectives | Moderate | High | High | Very High | Very High |
| | 7 - 8 <u>Serious</u> Would threaten goals and objectives; requires close management | Moderate | Moderate | High | High | Very High |
| | 5 - 6 <u>Moderate</u> Would necessitate adjustment to the overall function and require corrective action. May have a negative impact | Low | Moderate | High | High | High |
| | 3 - 4 <u>Minor</u> Would threaten an element of the function. May cause small delays or have a minor impact on quality | Low | Low | Moderate | Moderate | High |
| | 1 - 2 <u>Insignificant</u> Impact on function, or its objectives is negligible. Routine procedures would be sufficient to deal with the consequences | Low | Low | Moderate | Moderate | High |

Section B: Assessed Assurance (Effectiveness of control / mitigation activities)

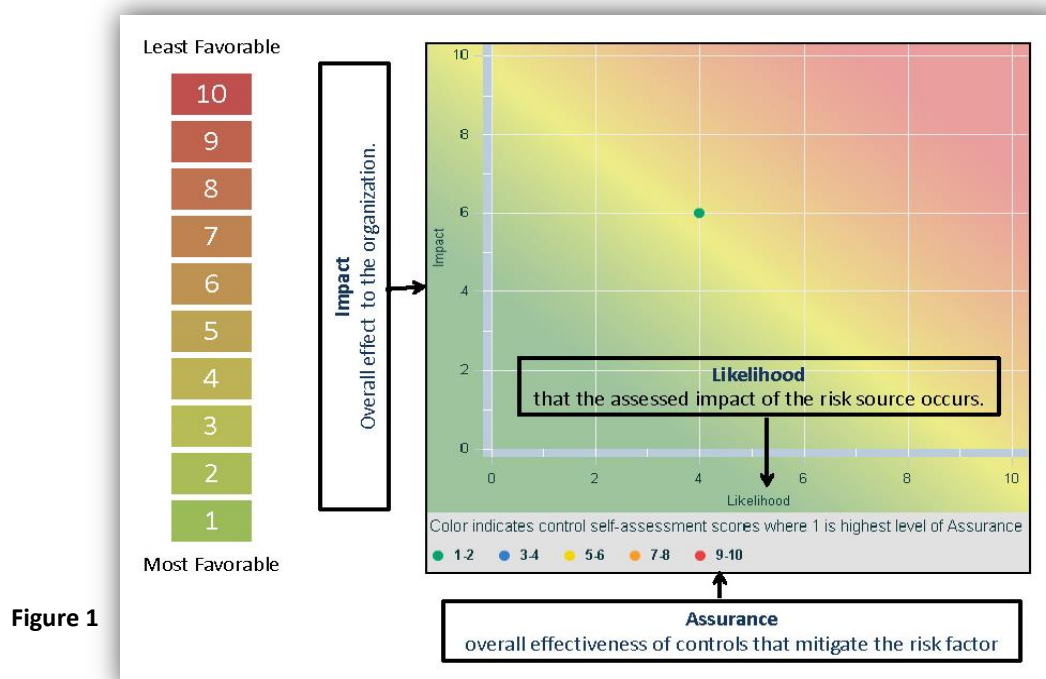
| | | | | |
|-----------------|------------|----------------------------|------------|--------------------|
| 1 - 2 Effective | 3 - 4 Good | 5 - 6 Could be improved | 7 - 8 Poor | 9 - 10 Ineffective |
|-----------------|------------|----------------------------|------------|--------------------|

Section C: Residual Risk Score Table

| Risk Level | Residual Index Score | Definition |
|------------|----------------------|--|
| Very High | Above 350 | Would prevent achievement of objectives, cause unacceptable cost overruns or schedule delays and requires close Executive attention |
| High | 201 to 350 | Substantial delays to project schedule, significant impact on technical performance or cost, and requires close management attention |
| Moderate | 101 to 200 | Requires identification and control of all contributing factors by monitoring conditions, and reassessment of program / project milestones |
| Low | 100 and below | Normal control and monitoring measures sufficient |

Appendix C

Assessed impact is on the y axis, likelihood is the x axis. Each critical risk has a data point associated with its assessed impact and likelihood. Additionally, each critical risk data point is color coded to reflect the level of assessed assurance (*Figure 1*).



A general heat map overview example, with the risk source Compliance, is provided to demonstrate risk source placement within a grid and formulas for calculating inherent and residual indexes (*Figure 2*).



Inherent Index is calculated by multiplying an individual Impact score by an individual Likelihood score to produce an individual Inherent Index score. All individual Inherent Index scores are averaged to produce an Inherent Index score for each Risk Source. Compliance was assessed 7 times and the average of the individual Inherent Index scores is 26, which is listed as the Average in the Inherent Index column of Table 1.

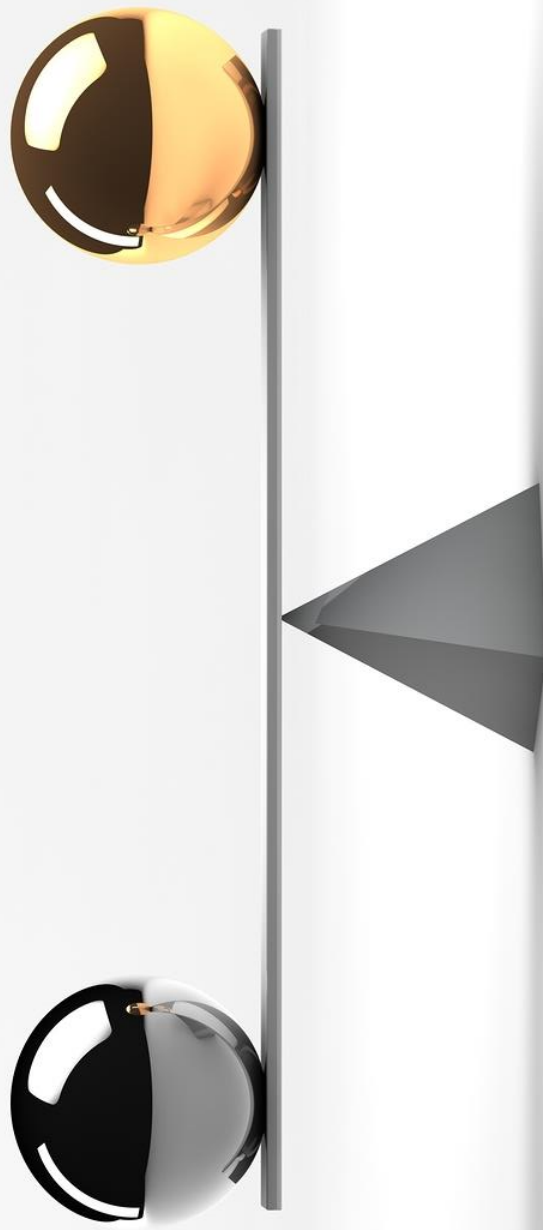
Table 1:

| Risk Source - Compliance | Impact | Likelihood | Inherent Index | Assurance | Residual Index |
|---------------------------------|---------------|-------------------|-----------------------|------------------|-----------------------|
| Risk Profile - 1 | 4 | 3 | 12 | 3 | 36 |
| Risk Profile - 2 | 6 | 5 | 30 | 4 | 120 |
| Risk Profile - 3 | 7 | 8 | 56 | 6 | 336 |
| Risk Profile - 4 | 6 | 6 | 36 | 6 | 216 |
| Risk Profile - 5 | 5 | 3 | 15 | 4 | 60 |
| Risk Profile - 6 | 5 | 4 | 20 | 4 | 80 |
| Risk Profile - 7 | 4 | 4 | 16 | 4 | 64 |
| Average | 5.29 | 4.71 | 26 | 4.33 | 130 |

The Residual Index measures the risk that remains after controls, mitigation activities, are taken into account. Residual index is calculated by multiplying an individual Inherent Index score by an individual Assurance score to produce an individual Residual Index score. All individual Residual Index scores are averaged to produce a Residual Index score for each Risk Source. Compliance was assessed 7 times and the average of the individual Residual Index scores is 130, which is listed as the Average in the Residual Index column of Table 1.

Residual Index tiering has been incorporated into the Risk Assessment Matrix to better delineate risk levels.

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Agency Risk Management

Mike Thone | Chief Risk Officer
Finance and Audit Committee Meeting
November 15, 2018

Agenda

- Risk management and internal control theory
- Overview of existing Agency risk management program
- MMB annual internal control certification requirements, including comparison of MMB's revised risk assessment approach versus MN Housing's historical approach
- Next steps: risk management program review and adjustment

What is Risk and Risk Management?

- Risk = effect of uncertainty on objectives and mission
- Plain language = “What could go wrong?”
- All activities involve risk (influenced by internal and external factors)
- Risk management = coordinated activities to direct and control an organization with regard to risk
- Plain language =
 - ID risks
 - Analyze and evaluate risks
 - Respond to risks (see next slide)

Responses to Risk

- Avoid – do not perform the business activity
- Transfer (e.g., counterparties, service providers, contracts, insurance)
- Accept - roll the dice
- Mitigate - use internal controls to reduce risk to an acceptable level

What is Internal Control?

- Internal controls = policies and procedures established and performed to provide reasonable assurance that objectives and mission will be met
- Internal control objectives:
 - Efficient and effective operations, including safeguarding assets and reducing fraud/waste/abuse
 - Accurate and reliable financial and program reporting
 - Compliance with laws, regulations, rules, policies

MN Housing Risk Management: Program Governance

- Finance & Audit Committee of the Board (program oversight)
- Risk Management Committee (program management)
- Chief Risk Officer (day-to-day program administration & coordination)
- Board adopted ISO 31000 Risk Management - Guidelines
- Policies and procedures: Statewide & MN Housing-specific
- Laws and statutes (e.g., Minn. Stat. Section 16A.057, Internal Controls and Internal Auditing)
 - MMB is responsible for coordinating the state's internal control system
 - MMB adopted the *Standards for Internal Control in the Federal Government* (AKA "The Green Book") as the state's required internal control standard
 - Annual MMB Internal Control System Certification (see next slide)

MMB Internal Control System Certification

Annual Requirements:

1. Certification form signed by Commissioner & Board Chairman
2. Control Environment Self-Assessment Tool (CESAT)
3. Agency Risk Assessment Worksheet and Risk Assessment Plan

MN Housing Risk Management (Cont.): Key Program Components

- Annual review and updating of internal policies and procedures
- Annual risk management, ethics, and fraud awareness & prevention training
- Annual conflict of interest disclosure, and Code of Conduct certification
- Agency Risk Profile
- Individual loan/grant/funding program risk assessment projects
- Investigation of misconduct allegations (fraud, misuse of funds, conflict of int.)
- Reporting (e.g., Clearinghouse, Mortgage Credit Committee, Risk Management Committee, Board)
- Annual CPA audit
- Annual MMB Internal Control System Certification (i.e., CESAT and Risk Assessment Plan)

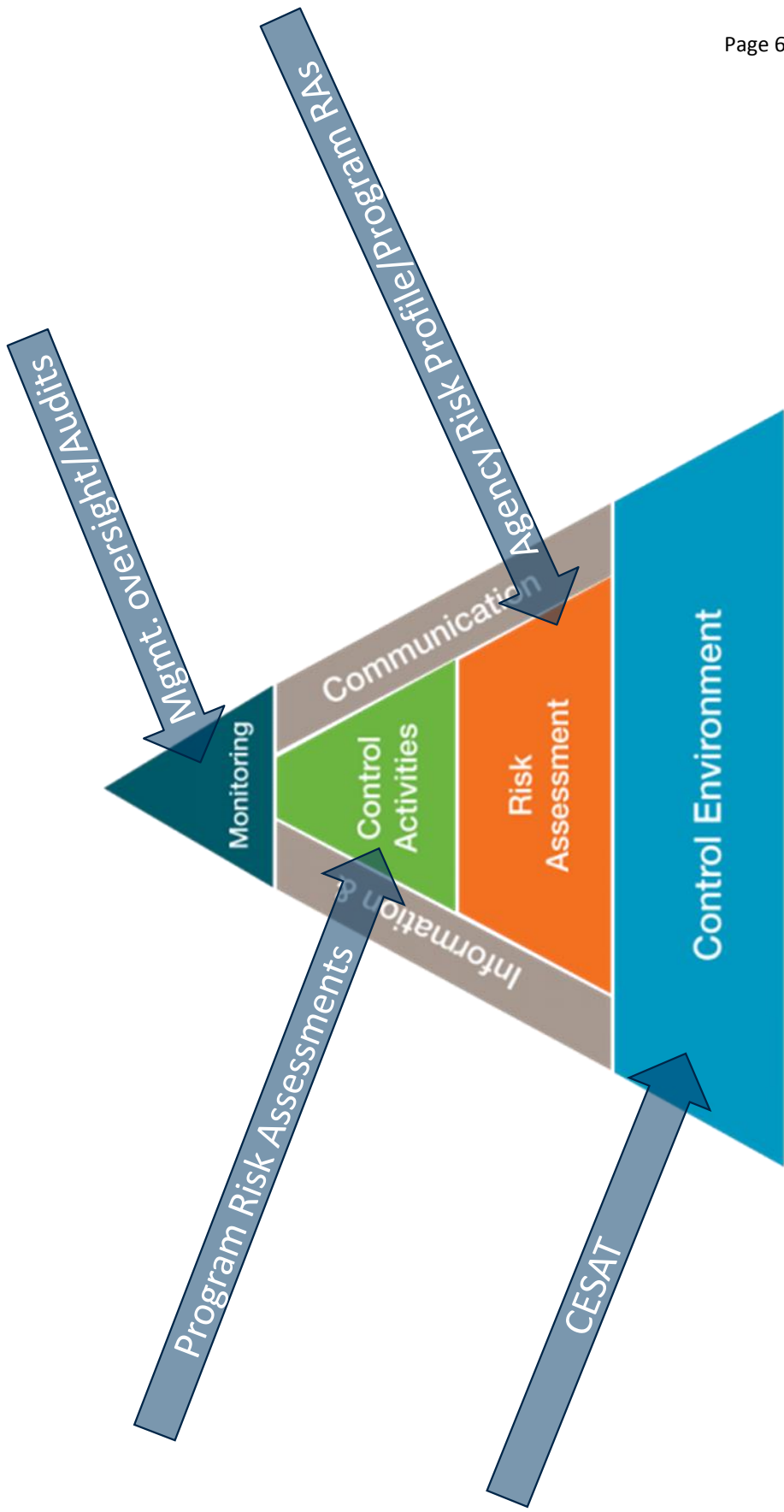
MN Housing Risk Management (Cont.): Tools and Resources

- MN Housing Enterprise Risk Management Framework
- Risk management intranet webpage
- Shared risk management network drive
- Board adopted ISO 31000 Risk Management - Guidelines
- Standards for Internal Control in the Federal Government (The Green Book)
- LogicMaster software (Agency Risk Profile)
- Navex EthicsPoint (3rd party misconduct reporting hotline)
- Statewide Internal Control Roundtable (community of practice)
- Association of Certified Fraud Examiners (ACFE) membership

Internal Control Components

- Control Environment: foundation of an internal control system, tone at the top, management controls 101
- Risk Assessment: agency-wide & individual projects
- Control Activities (aka “controls,” “internal controls,” “management controls”): actions taken by management to achieve objectives and respond to risks
- Information & Communication: must be timely/accurate/reliable
- Monitoring: routine management oversight & periodic audits

Internal Control Components Graphic



Evolution of Agency Risk Assessment

Prior to 2018:

- Control Environment Self-Assessment Tool (CESAT)
- Annual Agency Risk Profile (assess major categories of risk)
- Risk assessment projects completed on individual loan, grant, and funding programs

2018 and beyond - additional procedures:

- Risk Assessment Worksheet (ID and risk rank agency business processes)
- Develop Risk Assessment Plan to include the most mission-critical and risky business processes for deeper-dive assessment

Chief Risk Officer Board Report

- Revised the name, content and format of the report
- Move from quarterly to semi-annual reporting

Next Steps

1. Agency Risk Profile
 - Last presented to the board January 2018
 - Update and present the Agency Risk Profile early 2019
2. Comprehensive review and potential revision of the Agency Enterprise Risk Management Framework
 - International Organization for Standardization – Risk Management (ISO 31000)
 - Standards for Internal Control in the Federal Government (aka The Green Book)

Questions?

Mike Thone

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651-296-9813

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Committee Agenda Item: B.
Date: 11/15/2018

Item: Discussion regarding potential changes to the Board Policy on Investments

Staff Contact(s):

Kevin Carpenter, 651.297.4009, kevin.carpenter@state.mn.us

Terry Schwartz, 651.296.2404, terry.schwartz@state.mn.us

Request Type:

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> Approval | <input checked="" type="checkbox"/> No Action Needed |
| <input type="checkbox"/> Motion | <input checked="" type="checkbox"/> Discussion |
| <input type="checkbox"/> Resolution | <input type="checkbox"/> Information |

Summary of Request:

Agency staff would like to discuss potential changes and clarifications to the Board's policy on Investments. As the interest rate market environment in which the Agency operates changes, the importance of actively and prudently managing the Agency's cash and investments increases. Accordingly, staff is interested in engaging the Committee in a conversation about potential updates to the Investment policy. Staff will provide materials for the discussion to the members of the Board in advance of the committee meeting.

Fiscal Impact:

None

Meeting Agency Priorities:

- ☐ Address Specific and Critical Local Housing Needs
- ☐ Finance Housing Responsive to Minnesota's Changing Demographics
- ☐ Preserve Housing with Federal Project-Based Rent Assistance
- ☐ Prevent and End Homelessness
- ☐ Reduce Minnesota's Racial and Ethnicity Homeownership Disparity

Attachment(s):

- Draft policy mark-up (to be distributed prior to Committee meeting)

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